

NOTES ON SAGINAW RIVER FISHING,

BY D.C.RIDGLEY.

*River
described*

Bay City, Mich., July 5, 1894.

Saginaw River rises 2 1/2 miles south of Saginaw, Mich., flows in a northerly direction for 23 miles and empties into Saginaw Bay. It is formed by the union of three rivers:

1. The Cass River from the east.
2. The Shiawassee from the south, and
3. The Tittabawassee from the north.

The river varies in width from 50 rods to 100 rods with an average width of perhaps 60 rods. Its average depth at this time of year is about 10 feet. The current at this time of year is quite slow. In times of heavy rains the river rises and the current increases, especially in its upper course.

The current below is not affected so greatly by a rise of water, as there is a wider flood plain for the water to cover than there is above.

There are no natural barriers in the river in the way of cascades or rapids; no dams are constructed in the river, hence fish have an unobstructed waterway from the mouth to the source of the Saginaw River, and also up some of its branches for 10 m. or more.

The river runs for its entire length through a low, marshy region. The banks are but little above the present level of the water. On either side of the river the country is very level for long distances. From the river to the forest trees on either side is a distance varying from 2 to 4 miles. The intervening country is overgrown with a

heavy growth of different kinds of grass common to marshy territories. Occasionally along the bank a good growth of willows is seen. It is said that the river bottom at places is of mud, sand and gravel.

Old settlers say that in an early day the water of the River was very pure and clear. Of more recent years the river has been contaminated to a very great extent. This contamination may be traced mainly to 3 causes.

1. The lumbering and milling industries when the forests were being worked up. This put into the river great quantities of sawdust, plunks, bark and other refuse from the logs and mills. This means of contamination is rapidly decreasing, as the forests along the river and its branches are well worked up. But at the present time there are at least 3 booms of logs in the river between

Bay City and Saginaw. One at Melbourne, at least 1 1/2 m.in length and from 20 to 30 rods in width, another at a point 4 m.below Saginaw 1/2 m.long and 20 rods wide, and a third at Saginaw 1/2 m.long by 20 rods wide.

2. Numerous salt works were located along the river when the mills were numerous, as the refuse wood from the mills was used to evaporate the salt water. These salt blocks threw all waste material into the River, and it is thought that this contaminated the water to the detriment of the fish life. Mr.Geo.W.Green, of Saginaw, laid especial emphasis on this source of contamination. As mills have stopped work, salt wells have ceased to be worked until there are only a few salt works now in operation along the river.

The decrease in the number of mills and salt wells along the river seems to be bene-

fitting quite perceptibly the fish life of the river.

3. The third means of contamination of the river is the sewage and refuse of the cities on its bank. This increases with the growth of the cities, but is not considered as detrimental to fish life as the first two mentioned above.

Excellent fish season

The Saginaw R. is an excellent stream for fish and a large number of men make river fishing their business during the winter months, the law of Mich. giving them the privilege of fishing from November 1 to April 1, a period of 5 months.

Source of information

Our information concerning was obtained mainly from 4 sources:

1. Of Mr. Edward L. Trombley, South Bay City. He has been a fisherman on the river and is acquainted with the work along the

whole course of the river. For the past two years he has been a commission merchant in fish in New York City during the winter. He thinks he handles 25% of the fish caught on Saginaw R.

2. Mr. John Carl, South Bay City, who works 3 nets during the winter, fishing a little below the middle of the river.

3. Mr. Geo. W. Green, of the firm Green Bros., Saginaw. He has fished for many years, but is now a fish dealer in Saginaw. He has the best opportunity to know the fishing as worked above Saginaw.

4. Mr. Geo. Penniman, Bay City, who either catches or handles nearly all the fish caught at the mouth of the river, having handled 226 tons last winter.

In the following notes these persons will be referred to only when difference of opin-

ion occur, or when it is thought best to cite the authority for a statement.

*Season
Lower course* Fishermen on the lower course of the river work the entire season and would like to have the season open about 2 weeks earlier than it does, as the fish begin running quite well by the middle of October and the first good run has passed by before November 1.

Upper course Fishermen on the upper course of the river (from its source to several (6-7) miles below Saginaw) do not begin in the fall until ice forms and cannot fish much later than March 1, when the river begins to rise and threatens to carry the nets away in the current, which is very strong. The current is not so strong below and the nets are kept in.

fishes.

The kinds of fish caught in the River are:

Suckers. Perch.

"Shovel-nosed Pike."

Sunfish.

Rock Bass.

Black Bass.

Catfish.

Bullheads.

Wall-eye.

Principal fish

Suckers and Perch form the bulk of the catch. Mr. Carl thought Suckers formed $\frac{2}{3}$ of the catch and Perch $\frac{1}{3}$, all the rest amounting to not more than 2-3% of the whole.

market.

These fish find a ready market in winter because they are fresh fish and are preferred to frozen fish of other species (whitefish, trout, &c)

Mr. Carl says the fish enter the river in the following order:

Time when fish enter river

1. Bullheads and catfish last of August,

first of September.

2. Perch last of September and first of October.

3. Suckers October 15 to sometime in November, the November run being usually lighter than the October run, hence the desire for an earlier season.

The Suckers of last year then known before for a number of years. The year before they were very small. This is the common testimony and it is thought the fish are finding Saginaw R. better grounds for living than formerly.

4. The Wall-eye last year was so scarce that it plays no part in the fishing of last winter.

Speaking of the Wall-eye of previous years, Mr. Tromble and Mr. Penniman have observed light runs in January and February. They say that a thaw or rain which starts a

*Wall-eye
abundant*

Wall-eye

current down the river into the Bay "draws" the fish, and just after such times there is sure to be better fishing and frequently the Wall-eye ascends at this time.

The great run of Wall-eye is in April when they are ascending to spawn. None of these are now caught, as the nets must be lifted by April 1. Mr.Green says before the present law was passed in 1889 he has seen 5 or 6 tons of Wall-eyes taken daily from about 18 pounds for a few days. They would be past in from 10-20 days. He says the Wall-eye can find good spawning ground up the tributaries of the Saginaw R.to 10 or 12 m.above Saginaw.

Mr.Penniman and others think that whether the Wall-eye ascends the river or not in April depends on circumstances. If the river breaks up first, they ascend the River. If the Bay breaks up first, they spawn in

the shallow water of the Bay. They never spawn under the ice. Suckers are always found following Wall-eyes for the spawn which they eat in great quantities.

*Suckers eat
wall-eye
spawn*

The river winter fishing is done altogether by the use of pound nets and fyke or hoop nets. The pound nets are used principally in the lower course of the river in the deeper water, while the hoop nets predominate in the upper course of the river, but both kinds are found throughout the river's length. The leaders and hearts of the two kinds of nets are made and used in the same way, the only difference being in the trap or pot.

*river fishing
P
fykes*

The fishermen are allowed to set nets extending across $1/3$ of the channel from either side, leaving the middle $1/3$ of the channel open.

*length of
nets*

P. fyke: descrip

In setting the nets, the leaders are from 6-9 rods long with 5-inch or 6-inch mesh. The heart is from 40 feet to 50 feet long of 4-inch mesh. The pots of the pound nets vary in area from 14 feet square to 18 feet square, while many are 14 feet by 18 feet, and the depth varies with the depth of the water from 12 feet to 16 feet, with a mesh 2 1/2-inch or 3-inch. The pots of the fyke nets are usually 20 feet in length, the mesh being the same as in the pound nets.

Prof. of each

Mr. Tromble and Mr. Carl think 1/2 of all the nets are pounds and 1/2 fykes.

Mr. Penniman thinks a large majority, 2/3 at least, are pound nets.

Speaking for the 2 1/2 m. of the river above Saginaw, Mr. Green says 2/3 of the nets are fyke nets. He says below Saginaw the pounds are more than 1/2 the whole number.

Seasons method change.

Many of the fishermen begin work November

1. At this time they set in open water (without ice) and are usually fished 4 weeks (last year 6 weeks) before the ice begins to form. When the ice begins to form, most of the fishermen take out their nets and clean them thoroughly; some drop their nets to the bottom while the ice is freezing. It takes about 2 weeks for the ice to form and then the nets are set under the ice. A groove is cut through the ice along the line of the leader, and the leader is dropped in below the ice, sometimes the leader is frozen in the ice. The heart is set in the same way. In setting the pot a cake of ice is left in the pot. If the pot is 14 feet square, the cake of ice may be 10 feet square, leaving a channel of 2 feet on each side of the ice cake. The pot is lifted from this cake of ice. The pots are lifted every day if fishing is at all good. The ice in the narrow

channel must be removed and the pot drawn under the cake of ice to one edge and lifted. The fish are taken from the nets alive and put immediately in large boxes under the ice, where they are kept until required for shipment. These boxes are large enough to hold 2 or 3 tons of live fish. The fyke nets are also lifted from the ice through an opening left for that purpose.

ice thickness

The ice on the river averages about 12 inches in thickness, sometimes reaching a thickness of 15 inches to 18 inches. In a single night the ice over the opening of the net freezes to a thickness of 4 or 5 inches.

marketing

The fish are taken alive from the boxes under the ice and shipped directly to market; by freight if the weather is cold; by express if the weather is warmer. The fish are shipped alive, without ice, and frequent-

ly reach New York City alive.

Mr. Tromble and Mr. Carl think about 60% of the entire river catch is shipped to New York City and sold principally to the Jews; 40% find a sale at other points, no one place taking a large percentage.

Mr. Geo. W. Green, of Saginaw, finds a good local market, especially among the poorer people. His firm also keeps a wagon on the road among the farmers in the vicinity of St. Louis, Mich., selling from one wagon about 2 tons per week, sometimes trading fish for pork.

*Catch
amt* Mr. Tromble and Mr. Carl estimated the yearly catch on the river at 18,000 barrels of 200 pounds each, making 1,800 tons. They estimate, also, that the fishermen receive on an average \$3 per barrel.

Mr. Penniman handled last year at the

mouth of the river 220 tons, he estimated a catch of 500 tons below Bay City, and 500 tons above Bay City, in all 1,000 tons.

Mr. Geo. W. Green gave the following estimates for last year's catch from the source of the river to 3 m. below Saginaw, representing, as he thought, less than $\frac{1}{2}$, perhaps $\frac{1}{3}$ of the entire catch of the river

Suckers.	100 tons.
Perch.	60 "
Shovel-nosed pike.	10 "
Sunfish.	7 "
Black bass	5 "

	182 "

It is quite probable that the territory covered in this estimate does not produce $\frac{1}{3}$ of the fish.

Mr. Tromble and Mr. Carl estimate that in this work about 300 nets and 150 men are em-

*Catch
and
Species*

*P.
fishes.
no.
Doc.
fishermen
rc*

ployed on Saginaw R., the nets, as a rule, being owned by the operator who usually ships his own fish. They say 40 nets are operated in a space of 2 m. from mouth of Sheboyganing Cr. down the river to Center St. Bridge; at other places the nets are not so numerous.

Mr. Penniman estimated the number of nets operated below Saginaw to mouth of the river at 100 operated by 200 men, making 2 men to 1 net, instead of 1 man to 2 nets, as given in the above estimate.

Mr. Green says that above Saginaw about 80 nets are operated, 50 of which are fyke nets and 30 pound nets.

There are as many nets now in the river as can be fished profitably. About the same number have been fished during the past 3 or 4 years.

occupation

Many of the fishermen work on logs, and at other jobs along the river during the summer. Most of them, however, make winter fishing their only, and always their principal, business.

*Indian
Seines*

40 years ago some of the early settlers fished in the river after the ice broke up. They used seines and caught many tons of wall-eyes, which were always salted, as they could ship by boat only a few times each year.

Wall-eyes

P

25 years ago pound nets were first used in the river.

fykes

12 or 15 years ago fyke nets were first used advantageously in the river. They had been used before, but were provided with wings instead of leader and heart. Since the leader and heart have been used they

fish about as well as the pound.

hooks,
Some fishing is done in the river by set lines; while on boat between Pay City and Saginaw I saw two lines being lifted. They were set across the river and at intervals of 5-10 feet on the main line, short lines about 5 feet long were attached with hooks on their free end. In lifting, the main line was lifted from a row-boat, each short line was examined, fish caught were taken into the boat and the line dropped back into the water as the boat moved along the line.

cat,
I saw two fish taken from the hooks, both of which were catfish.

Mr. Benson says that each summer fish are taken in this way worth from \$1,000 to \$1,500.